

The National Estuary Program -Partners for Action-

Puget Sound
 Lower Columbia River
 Tillamook Bay
 San Francisco Estuary
 Morro Bay
 Santa Monica Bay
 Galveston Bay
 Barataria Bay
 Terrebonne Bay
 Tampa Bay
 Sarasota Bay
 Charlotte Harbor
 San Juan Bay
 Indian River Lagoon
 Casco Bay
 Piscataqua Region Estuaries
 Massachusetts Bays
 Buzzards Bay
 Narragansett Bay
 Patuxent Bay
 Long Island Sound
 NY-NJ Harbor
 Barnegat Bay
 Delaware Estuary
 Delaware Inland Bays
 Maryland Coastal Bays
 Aberdeen-Patuxent

• Clean Water Act Section 320
 • Protect & Restore Water Quality and Habitat
 • 28 NEPs

UNITED STATES • ENVIRONMENTAL PROTECTION AGENCY
 NATIONAL ESTUARINE PROGRAM

Non-Regulatory

NEPs can accomplish work with landowners that would not want direct involvement with EPA

The National Estuary Program — National Collaboration

- EPA HQ & Regions, NEPs and ANEP
- NEPORT
 - Acres restored
 - Funds leveraged
- Program Evaluations
- Annual Meetings
- Guidance



NEPORT Measures

acres restored

Funds leveraged

-Program Evaluations - collaborative

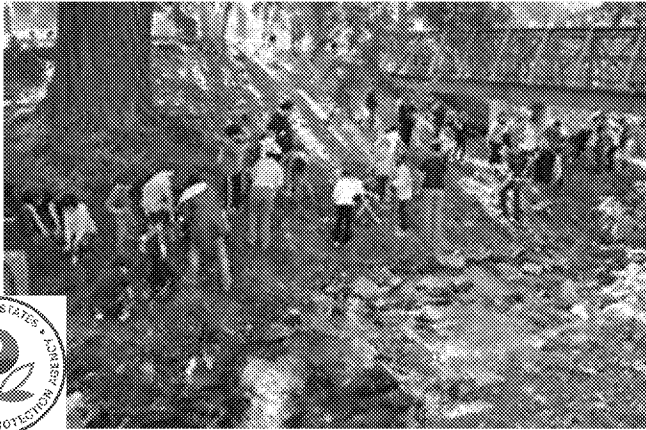
-CCMP Updates-

Annual Meetings in DC – EPA Lead

Annual meeting elsewhere – ANEP lead

HQ and Regions develop guidance – input from ANEP & NEPs

The National Estuary Program – Region 9



#1 Consensus
#2 CCMP
#3 Action



Each NEP

#1 - Consensus to identify

LOCAL priorities for Water Quality and Habitat

WITH PARTNERS –

, private citizens, non profits, businesses

#2 - CCMP – identified key actions to address priorities

#3 – Action – annual EPA funding and leveraged funding – about \$19 leveraged \$1 from EPA

- WITH PARTNERS

The National Estuary Program – Region 9



Through NEPs and their strong partnerships,
EPA supports action for many
CWA programs
and other EPA priorities

The National Estuary Program – Region 9

Nutrients Management

Non Point Source

Pollution Control

Pollution Prevention

Green Infrastructure

& Nature-based

Infrastructure

Water Quality

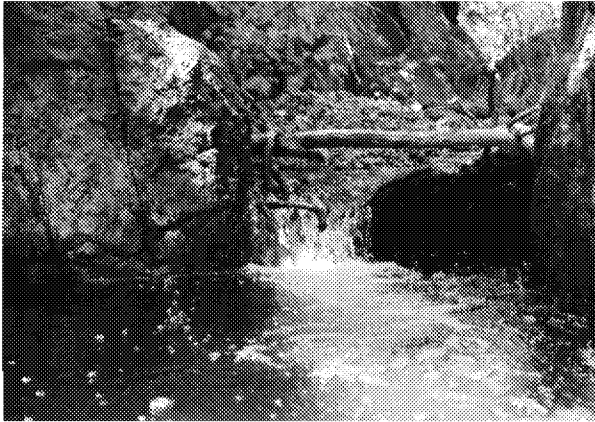
Monitoring

**Leveraged non-
Federal Funding**



To us it makes total sense

Morro Bay Watershed – beneficial uses

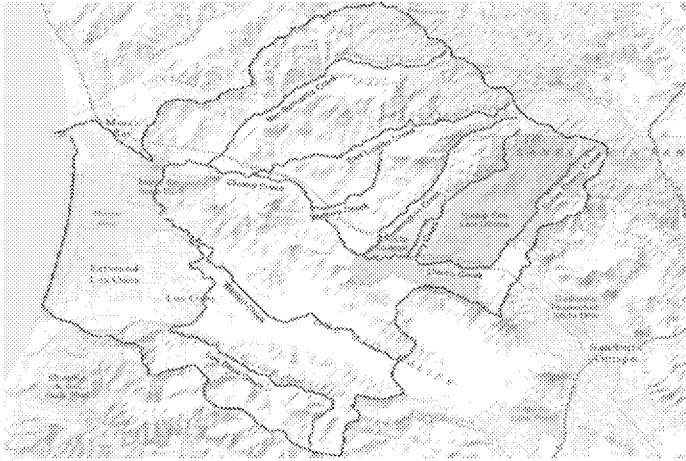


- Fishing
- Shellfish Farming
- Recreation – Contact
- Wildlife Habitat
- Rare and Threatened Species
- Freshwater



beneficial uses include:

Morro Bay Watershed - impairments



- Land Uses
- Impairments
 - Sediment
 - Pathogens
 - Nutrients
 - Dissolved Oxygen



Land Uses

Small Communities – Los Osos and City of Morro Bay

Agriculture - Ranch Land and Row Crops – private holdings

Other Big Landowners

National Guard Base

Cal Poly San Luis Obispo

US Forest Service

State Prison (only NPDES Permit)

(other 2 WWTPS are

City of Morro Bay – collection and pump stations)

Los Osos – collection and new plant with land application in watershed

Impairments

Chorro Creek de-listed in 2010 for DO due to

restoration, easement acquisition, and monitoring to document improvement.

Morro Bay National Estuary Program

Partnerships for Action



MORRO BAY
NATIONAL ESTUARY PROGRAM

Example: Shellfish Farming

- Monitor
- Control Sources
 - Wastewater leaks
 - Ag. runoff (cattle and crops)
 - Stormwater
- Protect & Restore Uses

Inspire Future Partners

Partnership for Action

For example – shellfish farming

Monitoring

For pathogens and sediment

Control sources to protect uses like shellfish farming

Control wastewater leaks – WWTP, septic, boats

Control Ag runoff – crops and range (fencing)

Control Stormwater sources – Mutts for the Bay

Protects Shellfish farming

Also NEPs inspire future partners – Upward Bound – designed a better case for a water temperature monitor

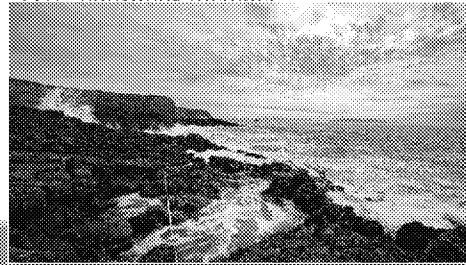
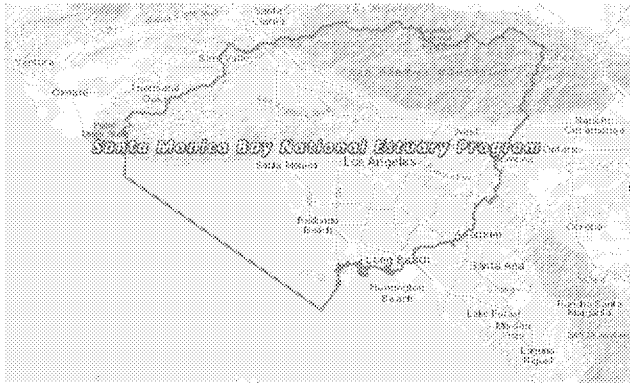
Santa Monica Bay National Estuary Program

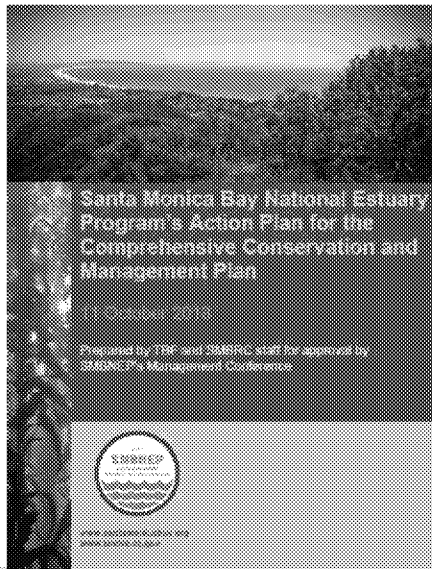
Formed in 1988, first CCMP approved in 1995

Santa Monica Bay Restoration Commission-The Bay Foundation partners in managing the NEP

Governing Board comprised of cities, POTWs, RB4, state agencies

• EPA - nonvoting member





CCMP Goals

Protect, enhance, and improve ecosystems of Santa Monica Bay and its watersheds

Improve water availability

Enhance socioeconomic benefits to the public

Enhance public engagement and education

Mitigate impacts and increase resiliency to climate change

Improve monitoring and ability to assess effectiveness of management actions

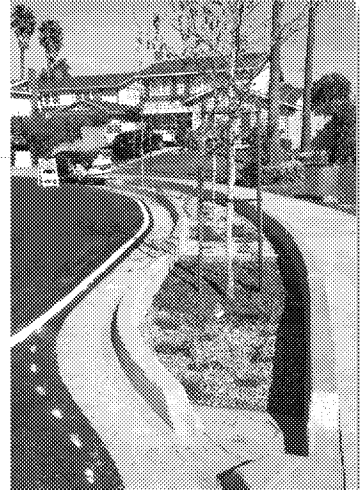
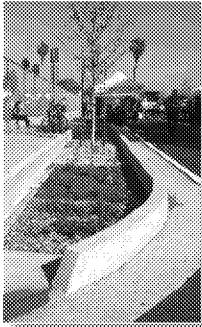
Approvals

-NEP governing board: December 2019

-EPA R9 and HQ: concurrence role

44 actions

Implementing TMDLs via Green Infrastructure



- Completed two projects in 2018: Milton Green Street and University Park Neighborhood Rain Gardens
- Mountains Recreation and Conservation Authority's Milton Green Street project installed 14 Vegetated Stormwater Curb Extensions adjacent to Ballona Creek to capture and treat runoff
- City of LA completed the University Park Neighborhood Rain Gardens project which installed 35 rain

This SMBRC-managed program provides funding for projects including coastal watershed contamination prevention and coastal and marine habitat restoration.

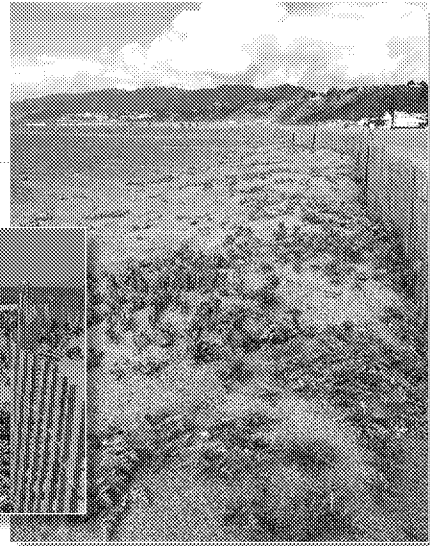
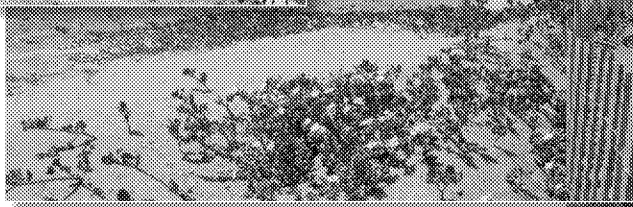
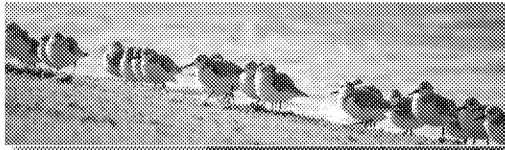
Improving Water Quality — Boater Education Program

This is a multi-faceted program designed to engage the Southern California boating community to reduce and eliminate boating-related ocean pollution.



- Published Changing Tide newsletters, annual tide pocketbook, and the Pumpout Nav app for pumpout station monitoring and public engagement
- Produced and distributed 8,500 Boater Kits and trained 71 Dockwalkers

Coastal resilience- Living Shorelines- Santa Monica Beach



Restoring beach, dune, and nearshore eelgrass habitats in the NEP study area to improve coastal resilience.

Continued monitoring Santa Monica Beach Restoration Pilot Project

Began outreach efforts and permitting for Malibu Living Shoreline Project

Applied for and received SCC funding for the Los Angeles Living Shoreline Project

Developed partnerships and initiated planning for the Manhattan Beach Dune Restoration Project

Coastal resilience- Kelp Forest Restoration

Commercial fishermen and TBF scientists restore and monitor rocky reefs in the Santa Monica Bay, respectively, as they are transformed from urchin barrens to kelp forests.

Underwater Arch Cove



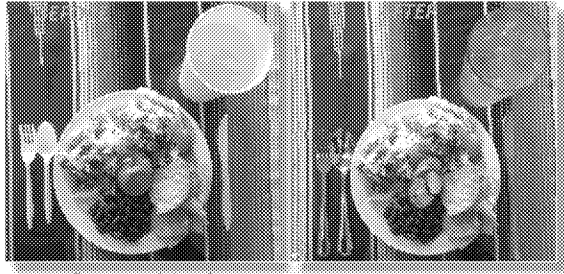
- In 2018, an additional 3.9 acres of kelp forest have been restored for a total of 46.9 acres since the project began in 2013
- Pre- and post-restoration monitoring continues across restoration sites

Marine Debris-

CLEAN BAY CERTIFIED



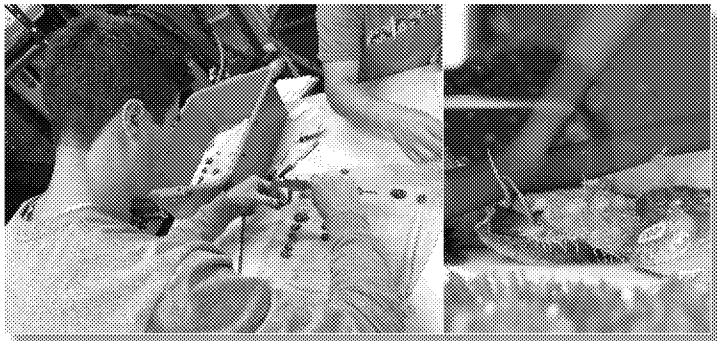
RETHINK DISPOSABLE LA



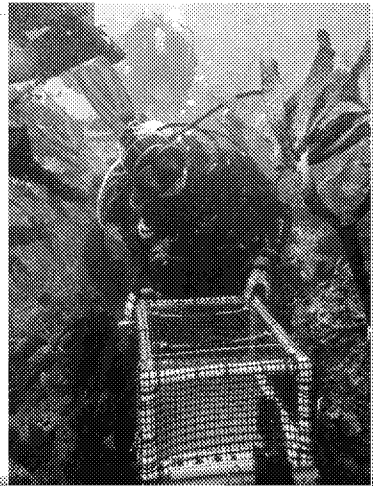
- Four participating restaurants
- Will reduce single-use disposables by almost 250,000 pieces every year
- Each restaurant will prevent over 2,500 lbs of waste and release 25,000 lbs of CO₂ (per year)

Abalone Restoration

This project implements a multifaceted approach to research and method development to restore populations of abalone to Santa Monica Bay and adjacent coastal waters.



- Outplanted 1,200 juvenile red abalone off PV Peninsula (Dec 2018)
- Completed white abalone recovery laboratory (second "Ab Lab")
- Developed SAFE's (short-term abalone fixed enclosures) for protection



LAX Dunes Restoration

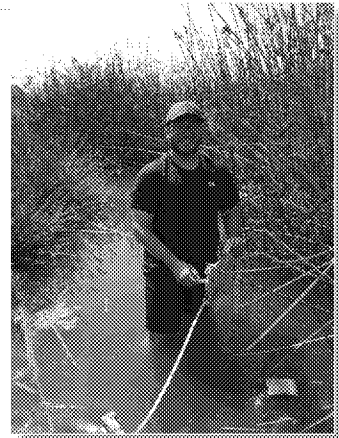
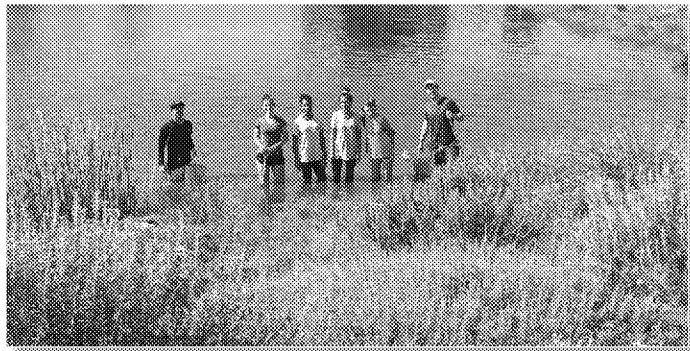
In partnership with LAWA, TBF conducts monthly volunteer restoration events at the LAX Dunes to remove invasive vegetation and teach the local community about the importance of coastal dune. TBF also coordinates biological monitoring activities and leads partners in larger-scale invasive plant removal efforts.



- In 2018, 689 volunteers completed over 2,000 hours and pulled over 650 bags of invasive vegetation
- Participants from over 200 zip codes, including many from underserved communities
- LA Conservation Corps partnered and removed almost an acre of Iceplant and weed-whacked 7.8 acres

TMDL Implementation and Habitat Restoration at Malibu lagoon

This long-term comprehensive monitoring program evaluates the condition of the post-restoration Lagoon through biological, physical, and chemical surveys.

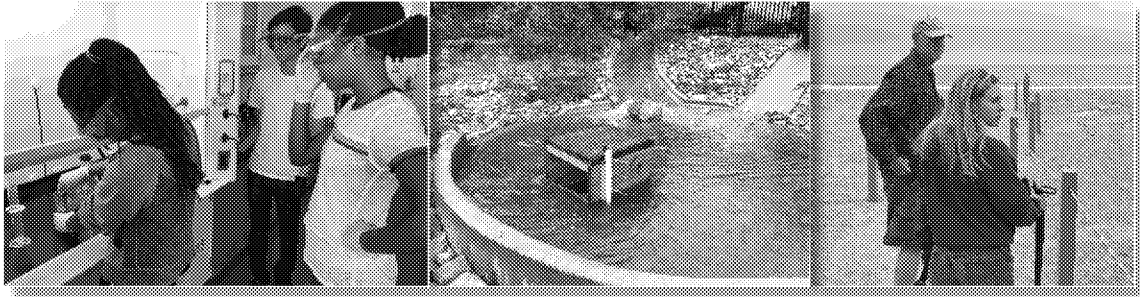


- Released 5-Year Comprehensive Monitoring Report in July 2018
- Lagoon continuing to show improved water circulation and wetland condition
- Continuing most surveys into sixth monitoring year

Continuing TMDL Implementation (2015-2020) will include monitoring for 2021-2025.

Scientific Research

TBF, LMU's Coastal Research Institute, and partners conduct applied science research to inform adaptive management strategies, fill regional data gaps, and inform climate change planning.



- Recruited, trained, and led 24 CRI Interns and three Faculty Fellows
- CRI developed and refined a protocol to extract microplastics from sediments
- Continued wetland data standardization and evaluation program with SCCWRP, CSULB, TRNERR
- Installed the Southern California Coastal Ocean Observing System at the Santa Monica Pier Station
- UCLA conducted research assessing the strength of kelp and seagrass in mitigating ocean acidification

Three interns conduct sediment research at Santa Monica Pier Station

EPA's Expectations- Governance and Structure

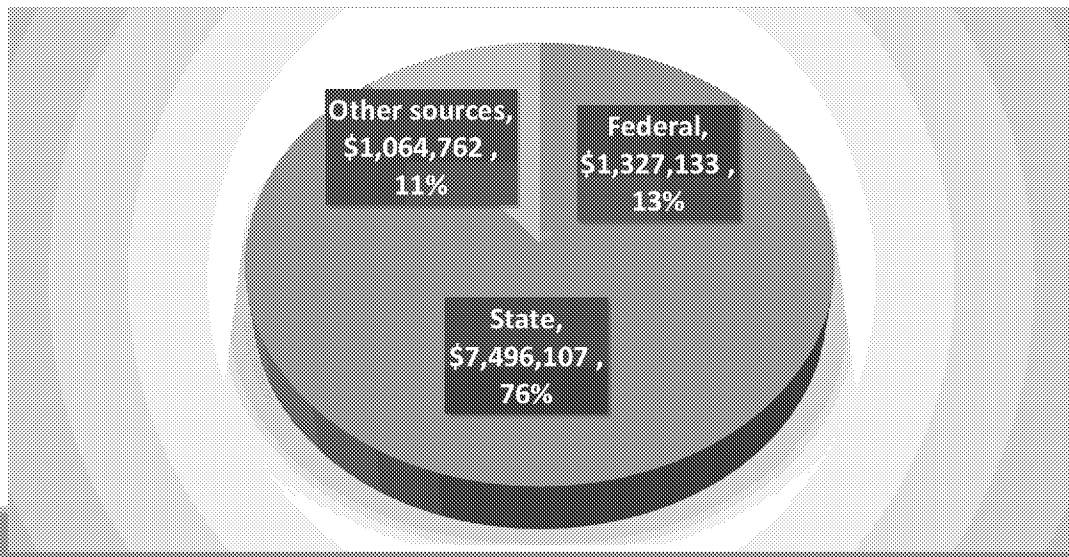
Ensure the NEP has a structure that is reflective of what is happening on the ground, supports CCMP implementation, and is aligned with EPA guidance.

21

Paper matches what's on the ground. Thoughtful process vs. reactionary

Supplemental \$- available to all NEPs, but was competitive process, ie not all NEPs were funded.

Santa Monica Bay National Estuary Program Funding, 2018



Projects

El Marader, beach at sunset with a long exposure (credit: P. Sullivan)

Santa Monica Primary Program Areas

CCMP Revision

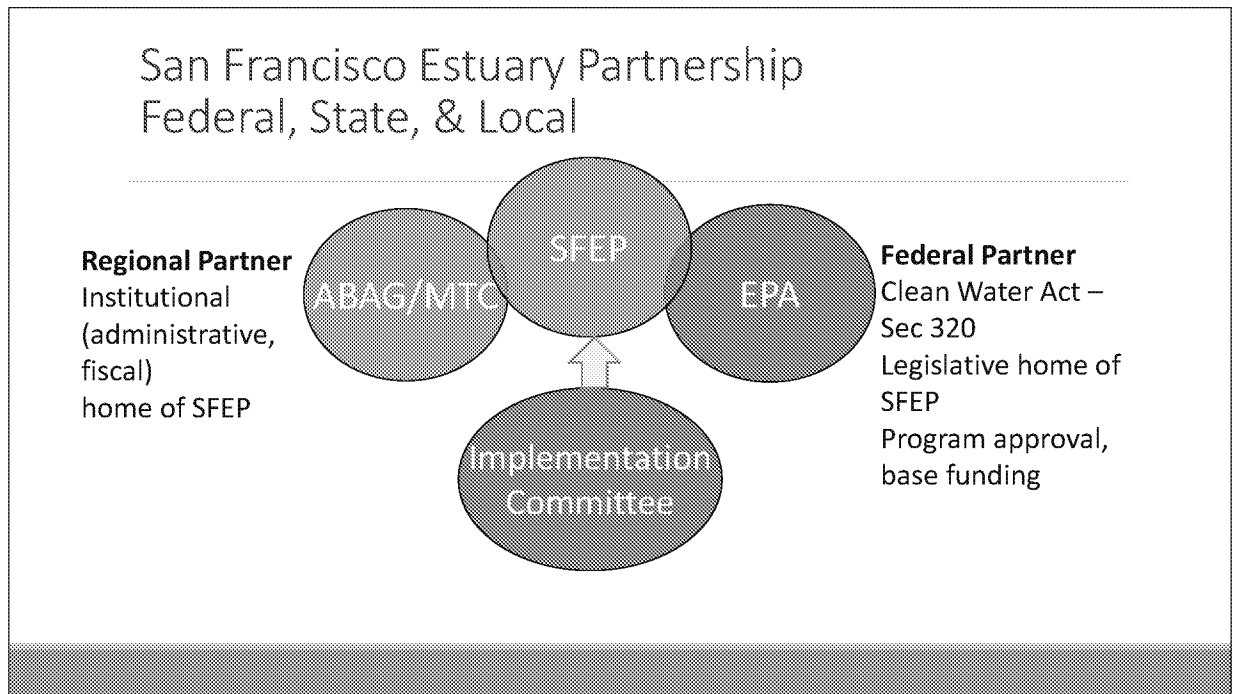
- ↳ Action Plan approved October 2018

TMDL implementation

- ↳ Green infrastructure to treat stormwater
- ↳ Clean Bay certified restaurant program
- ↳ Boater education program

Coastal resilience

- ↳ Beach and Dune restoration
- ↳ Kelp forest restoration



SFEP is local, state, federal partnership. We are a national program under U.S. EPA

our fiscal and administrative home is ABAG. With the staff consolidation of MTC and ABAG, we are now MTC employees and work with consolidated staff from all departments of MTC/ABAG to connect the health of the Estuary to land use, resilience, and other regional planning efforts.

The SFEP is guided by a 38-member Implementation Committee, which includes representatives from local, state, and federal agencies, businesses, and environmental organizations, and works with me directly in determining Partnership priorities.

DWR sits on IC (John Andrew is the primary rep with Michelle Selmon is the alternate)

SFEP Key Milestones

1987- EPA supported the creation of the San Francisco Estuary Project

1993- Comprehensive Conservation & Management Plan (CCMP) signed by EPA Administrator and CA Governor outlined management actions in 5 program areas and included the establishment of the San Francisco Estuary Institute and a regional monitoring program

2016 CCMP major revision, renamed the 'Estuary Blueprint'

2017 ABAG fiscal agent/ MTC replaced RB2 as home agency



2019 State of the Estuary Conference- held every two years

SFEP 2019 Priority Program Areas

Transforming Urban Waters Initiative

- Advance “shovel-ready” multi-benefit projects, especially in partnership with POTWs
- Support collaborative Nutrient Management Strategy
- Support local level capacity building + collaborative approaches

Environmental Justice

- Manage Disadvantaged Community Engagement IRWM grant round
- Participate in Government Alliance on Race and Equity’s “learning” and “implementation” cohorts
- Advance projects in disadvantaged and underrepresented communities (i.e., North Richmond)

Wetlands Restoration and Monitoring

- Staff to the SF Bay Restoration Authority to advance tidal restoration and resiliency goals
- Support the development of a regional monitoring program plan for wetlands in the Bay Area in partnership with state agencies and interested stakeholders



Thank you.

